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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,206	06/29/2001	Michal Cierniak	2207/11235	7577

7590 08/29/2008
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EXAMINER

TRUONG, LECHI

ART UNIT	PAPER NUMBER
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2194

MAIL DATE	DELIVERY MODE
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08/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/896,206	Applicant(s) CIERNIAK, MICHAL	
	Examiner LECHI TRUONG	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 17-20 are presented for the examination. Claims 1-16 are cancelled.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/29/2008 has been entered.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 17-20 are rejected under 35 U.S.C. 101 because they are directed to non-statutory subject matter.
4. Claims 17-20 are non-statutory because it is not tangibly embodied in a manner so as to be executable as the only hardware is in an intended use statement.

Claim 17 defines "System" in the preamble and the body of the claim recites " interface", "class", "interface vtable", "object". Interface, class, interface vtable, object appear to be software modules, which are not tangible. Therefore, claim 17 is non-statutory because it recites a system claim that comprises non-tangible embodiments.

Drawings

6. The drawings are objected to because Fig 3A is missed before the figure 3B was labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 17, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leach US (5, 745764) in view of Corbett (US 5515536 A).

As to claim 1 , Leach teaches implementing an interface(implements the interface, col 6, ln 1-5) , accessing in a class an object oriented programming environment(col 4, ln 14-20), a first interface D(the IBasic, col 8, ln 5-10/ D interface, col 14, ln 15-20), a second interface E(IDatabase interface, col 8, ln 5-10/ C interface, col 14, ln 15-20), a class G(class S1, col 13, ln 63-67/ col 14, ln 5-10), a class S1 configured to implement interface D and interface C(col 13, ln 64-67), a first function G1(QueryInterface, col 8, ln 15-20), a first function G1 that is member of class G and a member of interface D(col 6, ln 55-65/ col 15-20), a second function G2(virtual function defined for C interface, col 14, ln 15-20/ methods, col 13, ln 62-67/ &B::file, Fig. 8), a second function G2 that is a member of class G and a member of interface D but not a member of interface E(col 13, ln 62-67/ Fig. 8), a third function G3(virtual function defined for C interface, col 14, ln 15-20/ methods, col 13, ln 62-67/ &P:: print, Fig. 8), a third function G3 that is a member of class G and a member of interface D but not a member of interface D(col 13, ln 62-67/ Fig. 8), a first interface vtable G.D(virtual function table 403A, col 14, ln 15-20), a first interface vtable G.D comprising a first pointer configured to point to function G1 and a second pointer configured to point to function G2, col 14, ln 15-20/ Fig. 8), a second interface (virtual function table 205, col 8, ln 10-15/ virtual function table 403, col 14, ln 14-20), a second interface vtable comprising a first pointer configured to point to function G1 and second pointer

configured to point to function G3(col 8, ln 15-20/ col 14, ln 15-20), an object(method, col 27, ln 40-41), an object , the object being an instance of class G(col 27, ln 40-41).

Leach does not teach if the object is of type of D, interface vtable G.D is used during runtime to connect functions G1 and G2 with the object; and if the object is of the type E, interface vtable G.E is used during runtime to connect functions G1 and G3 with the object. However, Corbett teaches if the object is of type of D, interface vtable G.D is used during runtime to connect functions G1 and G2 with the object; and if the object is of the type E, interface vtable G.E is used during runtime to connect functions G1 and G3 with the object (The virtual function table 512A contains pointers to the code that implement the virtual function members of the IDispatch interface of the document class (e.g., Invoke () 515). The virtual function tables 512B contains pointers to the code that implement the virtual function members of the document class (e.g., GetPara () 513), col 12, ln 40-50).

It would have been to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Leach with Corbett to incorporate the feature of the object is of type of D, interface vtable G.D is used during runtime to connect functions G1 and G2 with the object; and if the object is of the type E, interface vtable G.E is used during runtime to connect functions G1 and G3 with the object because this provides an implementation of each function of the interface to allow the word processing objects to be accessed by other programs.

As to claim 18, Leach teaches an instance of interface D, the instance of interface D including a third pointer to point to interface vtable G.D; and an instance of interface E, the instance of interface E including a fourth pointer to point to interface vtable G.E(col 14, ln 15-20).

As to claim 20, Leach teaches a fifth pointer configured to point to a canonical base address for the object (col 14, ln 10-15/ Fig. 4).

8. Claim 19 is rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention of Leach US (5,745764) in view of Corbett(US 5515536 A), as applied to claim 1 above, and further in view of Hasha(US 7353271 B2).

As to claim 19, Leach and Corbett do not teach the pointer in the vtables allow for casting of references of an interface type into references whose type is defined by the class configured to implement the interface for that interface type. However, Hasha teaches the pointer in the vtables allow for casting of references of an interface type into references whose type is defined by the class configured to implement the interface for that interface type (The virtual function table contains the address of each virtual member function in the class in order of declaration. The data structure for such a class contains a virtual function table pointer (pVTable). When memory for a data structure is allocated at run time, the virtual function table pointer is initialized with the address of the associated virtual function table. Thus, all objects of a certain class type point to the same virtual function table. To implement the invoking of a virtual member function, the compiler generates code to access the virtual member function through the virtual function table, col 3, ln 2-9).

It would have been to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Leach and Corbett with Hasha to incorporate the feature of casting of references of an interface type into references whose type is defined by the class

configured to implement the interface for that interface type because this avoids the difficulties of having to change class definitions when a new virtual function is added to an interface.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LeChi Truong whose telephone number is (571) 272-3767. The examiner can normally be reached on 8 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIP. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIP system, contact the Electronic Business Center (EBC) at 866-217-9197(toll-free).

/LeChi Truong/

Examiner, Art Unit 2194

LeChi Truong

August 29, 2008